



FARMERS'
ALMANAC
AND
ANNUAL CIRCULAR
OF
FERTILIZERS

MANUFACTURED BY

Rafferty & Williams,

FROM THE

**BLOOD AND BONES OF THE CATTLE SLAUGHTERED
IN THE CITY OF NEW YORK.**

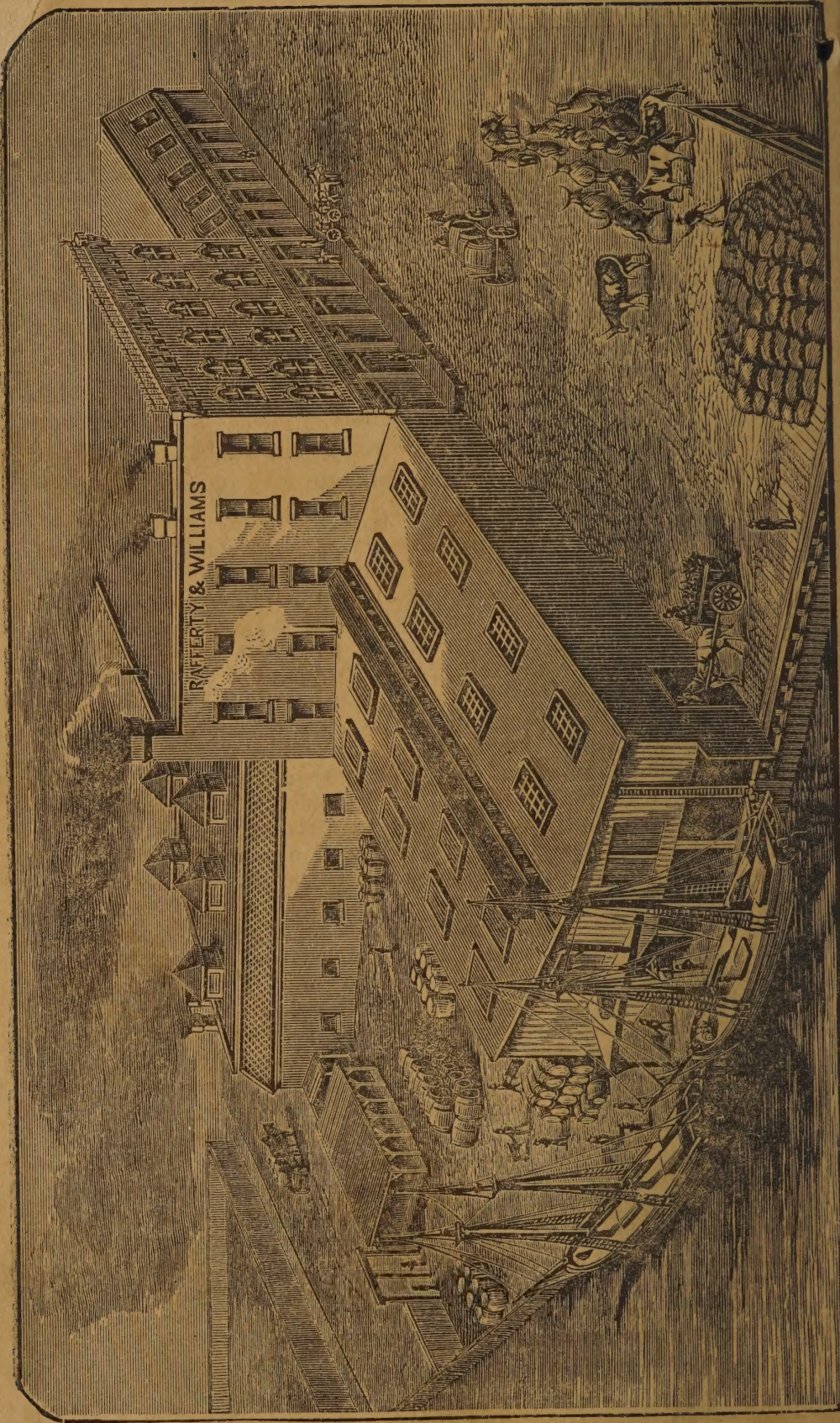
PRINCIPAL OFFICE AND FACTORY:

Foot of 44th Street, East River, New York.

WAREHOUSES:

Baltimore, Md., & Rochester, N. Y.

DANIEL & SON, Printers & Binders, 17, 19, 21 & 23 Rose St., N. Y.



THE WORKS OF RAFFERTY & WILLIAMS.

OUR works cover a large area of ground and comprise two different factories—one at Forty-third and Forty-fourth streets and the East River, New York, and the other at Hunter's Point, L. I. At the former are received daily great quantities of offal, blood, bones, etc., which are immediately placed under processes of treatment and converted, while yet fresh, into such products as are afterwards used in the manufacture of our complete fertilizers. These products, consisting of the dried blood, ground bone, etc., are removed to the factory at Hunter's Point, where they are mixed with acid, potash salts and other chemicals, to produce superphosphates and special manures of the most perfect character. Large sums of money have been spent upon machinery, and the most improved scientific processes are in use. For every particle of raw material there is found a use, and no element of value is lost or destroyed. Work goes on night and day, and the most rigid supervision is incessantly maintained. The productive capacity of our entire works is 1200 to 1500 tons per week. The fertilizers manufactured are shipped to all parts of the country, from Maine to the Mississippi. Of the crude materials made we supply largely other manufacturers, both in this country and in Europe. Some 250 hands are necessary to carry on the business, and all their work is laid out in the most careful and systematic manner.

Our works are so arranged and so managed that they are always clean, and free from the nuisance that generally arises from rendering and steaming such large quantities of animal matter and bones—the gases arising from the cooking being disposed of by burning and condensation. A wharf fronting on the East River of 260, at our New York factory, and another of 100 feet, at our Hunter's Point factory, with twenty to thirty feet depth of water, enables the largest vessels to load and unload, directly into our factories, thus giving us unsurpassed facilities for shipping. We also have our own steam lighter and barges for shipment of our goods to the various railroad and steamboat depots centering at New York. Finally we claim to offer fertilizers whose quality is not surpassed by that of any in the market. But this claim does not rest on our unsupported assertion. In the following pages will be found some expressions of opinion from practical men who have tested our productions. To them we confidently refer the consumer, and would respectfully ask that he give our products a trial.

FACTS THAT ARE OF IMPORTANCE

TO ALL WHO

CULTIVATE THE LAND.

ALL well-informed agriculturists are aware that good and uniformly reliable plant-foods are the first essentials to success in their business. Such plant-foods, or chemical fertilizers, we offer. In their composition are embodied the precise elements that the soil most needs, whether for producing cereal crops, cotton, tobacco, or any other staple.

The elements are obtained from the blood, offal, bones, etc., of a large proportion of the cattle and sheep killed for the food of New York. The principal abattoirs of the city are in the immediate vicinity of our works, between Forty-third and Forty-seventh streets and the East River, New York.

We manufacture various brands of fertilizers, every one of which is sold under guaranteed analysis. In the succeeding pages are given the reports of analyses of some of our foremost scientists, to which careful attention is invited.

We do not undertake to point out to farmers what particular brands they should use, but we state clearly and accurately the ingredients and proportions thereof contained in each. Their usefulness is fully established, the best proof of which is that the demand increases so rapidly as to tax severely our facilities.

One department of our business includes the manufacture of supplies for the use of those who prefer to prepare their own fertilizers. To such we offer also potash salts, imported direct from Germany. We are ready to supply those ingredients separately, or will compound them according to any formula that may be furnished to us.

Our present extensive business has been built up upon the basis of the best goods at the lowest prices, and to this policy we shall faithfully adhere in the future.

Respectfully,

RAFFERTY & WILLIAMS.

CALENDAR FOR 1881.

Being the latter part of the 105th and the beginning of the 106th year of the Independence of the United States of America. Also, the year 7390—91 of the Byzantine Era; the year 5641—42 of the Jewish Era; the year 2634 since the foundation of Rome, according to Varro; the year 1299 of the Mohammedan Era, or the Era of Hegira, which begins November 23, 1881.

THE SEASONS.

		Washington Time.	Chicago Time.
Vernal Equinox, (Spring begins).....	March 20,	5 h. 57 m. M.....	5 h. 15 m. M.
Summer Solstice, (Summer begins).....	June 21,	2 h. 12 m. M.....	1 h. 30 m. M.
Autumnal Equinox, (Autumn begins).....	Sept. 22,	4 h. 34 m. A.....	3 h. 52 m. A.
Winter Solstice, (Winter begins).....	Dec. 21,	10 h. 44 m. M.....	10 h. 2 m. M.

RAM, Aries, ♈ THE HEAD.

TWINS,
Gemini,
ARMS.



LION,
Leo,
HEART.



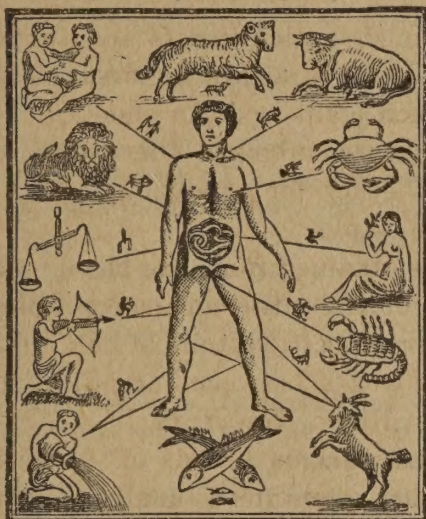
BALANCE,
Libra,
REINS.



ARCHER,
Sagittarius,
THIGHS.



WATERMAN,
Aquarius,
LEGS.



BULL,
Taurus,
NECK,



CRAB,
Cancer,
BREAST.



VIRGIN,
Virgo,
BOWELS.



SCORPION,
Scorpio,
LOINS.



GOAT,
Capricornus,
KNEES.



FISHES, Pisces, ♓ THE FEET.

CHRONOLOGICAL CYCLES.

Dominical Letter.....	B.	Golden Number.....	1	Roman Indiction.....	9
Epact.....	30	Solar Cycle.....	14	Julian Period.....	6594

FIXED AND MOVABLE FESTIVALS.

Epiphany.....	Jan. 6.	Palm Sunday.....	April 10	Trinity Sunday.....	June 14
Septuagesima Sunday.....	Feb. 13.	Good Friday.....	April 15	Corpus Christi.....	June 19
Quinquagesima — Shrove Sunday.....	Feb. 27.	Easter Sunday.....	April 17	St. John, Baptist.....	June 22
Ash Wednesday.....	Mar. 2.	Low Sunday.....	April 24	Michaelmas Day.....	Sept. 26
First Sunday in Lent.....	Mar. 6.	Rogation Sunday.....	May 22	1st Sunday in Advent.....	Nov. 27
St. Patrick.....	Mar. 17.	Ascension Day.....	May 26	St. Andrew.....	Nov. 30
		Pentecost — Whit-Sunday.....	June 5	St. Thomas.....	Dec. 21
				Christ was Day.....	Dec 25

MORNING AND EVENING STARS.

MERCURY will be evening star about February 23d, June 19 and October 15; and morning star about April 7, August 6, and November 24.

VENUS will be evening star till May 3; then morning star for the rest of the year.

JUPITER will be evening star till April 22; then morning star till November 13; and evening star again for the rest of the year.

ECLIPSES FOR THE YEAR 1881.

In the year 1881 there will be four Eclipses, two of the Sun, and two of the Moon; and a Transit of Mercury across the Sun's disc.

I. A Partial Eclipse of the Sun, May 27. Visible to the northern part of North America and to Northern Asia. To the more Northern and Western of the Central States, it will appear as a slight Eclipse, beginning ordinarily a little before sun-set. It will begin as follows: Cleveland, 7 h. 20 m. A., Indianapolis, 7 h. 11 m. A.; Chicago, 7 h. 0 m. A.; St. Louis, 6 h. 58 m. A.

II. A Total Eclipse of the Moon, June 11—12. Visible to North and South America, and to portions of Africa and Australia.

III. An Annular Eclipse of the Sun, November 21. Invisible. Visible to southern extremity of South America, and to the Antarctic Ocean.

IV. A Partial Eclipse of the Moon, December 5. Invisible. Visible more or less to Europe, Asia, Africa, Australia, and north-western portion of North America.

V. A Transit of Mercury over the Sun's disc, November 7. Invisible east of a line drawn through Cleveland, Ohio, and Charleston, S. C. To the west of that line, it will be partly visible.

DIRECTIONS

FOR USING

CHEMICAL FERTILIZERS.

One of the most important points is to get them evenly distributed.

Being so highly concentrated, they should not come in direct contact with the young sprouts. To prevent this, and to obtain a more even spreading, it is well to mix with an equal amount of rich loam before using.

For *Wheat, Rye, Oats and Buckwheat*, when drilled with the grain, about 200 pounds to the acre. When applied broadcast, 300 to 400 pounds to the acre, just before the last harrowing, and harrow it in.

For *Corn*, a small handful in the hill, cover with earth, then plant the seed. A light top-dressing, after first hoeing, can be applied with advantage.

For *Fodder Corn*, apply 200 to 400 pounds to the acre, just before last harrowing, and harrow it in.

For *Potatoes*, put a small handful in each hill, knocking a little earth over it with the foot before planting the seed.

For *Asparagus and Strawberry Beds*, a liberal application in making the bed, some eight inches below the surface, then sprinkle lightly over the bed, and rake in. On old beds apply a top dressing, and rake in.

For *Cabbage, Cucumbers, Squash, Melons and Tomatoes*, use a small handful in each hill, or apply by liberal broadcast sowing before last harrowing, and a top dressing once or twice during early growth.

Be careful they do not come in contact with the roots of transplanted plants.

For *Peas and Beans*, about 400 pounds to the acre, applied as with wheat.

For *Grass*, sow broadcast 200 to 300 pounds to the acre when the ground is moist, or before rain. Should be applied in early Spring or after mowing.

For *Tobacco*, use a gill in each hill, or 1,000 pounds to the acre, broadcast.

For *Hops*, when cultivated in the Spring, distribute about two good handfuls to each hill, rake and hoe in. If time be had, a subsequent light top dressing will amply repay for labor.

JANUARY,
1881



HAS
31 DAYS.

MOON'S PHASES.

	BOSTON.			NEW YORK.			WASH'TON.		
	D.	H.	M.	D.	H.	M.	D.	H.	M.
F. Q.	7	3	25	M.	3	13	M.	3	1
F. M.	15	6	50	M.	6	38	M.	6	26
L. Q.	23	4	4	M.	3	52	M.	3	40
N. M.	29	8	4	A.	7	52	A.	7	40

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Dela., Virginia and N. Carolina.

D.	D.	<i>Historical Events.</i>	
M.	W.		

1	Sa	☉ in perigee. <i>Circumcision.</i>
2	S	♀ sets, Boston, 8 h. 1 m. A.
3	M	♂♀♄. Bat. of Princeton, 1777
4	Tu	Cold Sunday, 1835
5	W	Steamer San Francisco lost, '45
6	Th	♂♄♄. <i>Epiphany.</i>
7	Fr	♂♄♄. Fillmore b., 7th.
8	Sa	♀ in aphelion. [1800
9	S	♂♄♄. N. Y. founded 1614
10	M	♂ rises, Boston, 6 h. 2 m. M.
11	Tu	Alabama seceded, 1861
12	W	♂♄♄. S. P. Chase born, 1808
13	Th	♄ in apogee.
14	Fr	Stanton, Sec'y of War, 1862
15	Sa	☺ 15th. E. Everett d. 1865
16	S	♄ sets, Bost. 11h. 15m. A.
17	M	Pres. Taylor died, 1862
18	Tu	Daniel Webster born, 1782
19	W	♂♄♄. Georgia seceded, 1861
20	Th	♄ stationary.
21	Fr	♄ sets, Boston, 11 h. 46 m. A.
22	Sa	Third Attack on Vicksburg '63
23	S	☾ 23d. Coldest day in 1873
24	M	♄ rises, Boston 8:13 A.
25	Tu	Michigan admitted, 1837
26	W	♂♄♄ sup.
27	Th	♂♄♄. Audubon died, 1851
28	Fr	♄ gr. hel. lat. S. ♄ in perigee.
29	Sa	20th. ♂♄♄. Kansas
30	S	☾♄♄. [adm. 1861
31	M	♄ sets, Boston, 0 h. 46 m. M.

Sun	Sun	Moon	Sun	Sun	Moon
rises	sets	sets	rises	sets	sets
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
7 30	4 39	6 19	7 25	4 44	6 23
7 30	4 40	7 38	7 25	4 45	7 41
7 30	4 41	8 53	7 25	4 46	8 54
7 30	4 42	10 5	7 25	4 47	10 5
7 30	4 43	11 14	7 25	4 48	11 13
7 30	4 44	morn	7 25	4 49	morn
7 29	4 45	0 22	7 25	4 50	0 20
7 29	4 46	1 27	7 24	4 51	1 24
7 29	4 47	2 30	7 24	4 52	2 26
7 29	4 48	3 31	7 24	4 53	3 26
7 28	4 49	4 29	7 24	4 54	4 23
7 28	4 50	5 21	7 23	4 55	5 15
7 28	4 51	6 6	7 23	4 56	6 1
7 27	4 53	6 45	7 23	4 57	6 40
7 27	4 54	rises	7 22	4 58	rises
7 26	4 55	6 23	7 22	5 0	6 26
7 26	4 56	7 23	7 21	5 1	7 25
7 25	4 57	8 24	7 20	5 2	8 25
7 24	4 59	9 26	7 20	5 3	9 26
7 24	5 0	10 29	7 19	5 4	10 28
7 23	5 1	11 35	7 19	5 6	11 32
7 22	5 2	morn	7 18	5 7	morn
7 22	5 4	0 43	7 17	5 8	0 39
7 21	5 5	1 52	7 17	5 9	1 47
7 21	5 6	3 1	7 16	5 10	2 56
7 20	5 7	4 8	7 15	5 11	4 2
7 18	5 9	5 9	7 14	5 13	5 4
7 17	5 10	5 59	7 13	5 14	5 54
7 16	5 11	sets	7 13	5 15	sets
7 15	5 13	6 25	7 12	5 16	6 27
7 14	5 14	7 41	7 11	5 17	7 42

COLD SPRING HARBOR, N. Y., November 30, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gentlemen:—In Sept. 1879 I bought some of your Universal Ammoniated Dissolved Bone and used it on both rye and wheat, and applied about 300 lbs. to the acre. The rye when cut was 5½ feet high and the heads well filled. The wheat was all of good size, large heads and well filled.. Am now, Nov. 1880, thrashing the grain, or I should give you some particulars as to the results.

Yours,

SAMUEL A. JONES.

AMMONIATED BONE SUPERPHOSPHATE.



This material is the Purest and most concentrated form in which we can offer a mixture of

DISSOLVED BONE, BLOOD, ANIMAL MATTER, AND POTASH,
for general use on all crops. It is a standard fertilizer of the highest possible grade, and after a test of nearly five years on all kinds of soil, stands unsurpassed as a chemical fertilizer. This superphosphate is

FREE FROM ALL ADULTERATIONS,
and contains no cheap ingredients to make bulk as it is called; hence for use in the interior where railroad freights are a large item on the cost of fertilizers this is just the article, as only one half the weight is required for the same amount of ammonia, phosphoric acid and potash, as would be with most other fertilizers. Remember this fertilizer is made of

BONES AND BLOOD,
and these are gathered in the raw state from the slaughtering establishments near our factory. We guarantee the following very high analysis with each lot sold:

<i>Ammonia</i>	3 to 4%
<i>Available Phosphoric Acid</i>	10 to 12%
<i>Potash</i>	2 to 3%

Below is given an analysis of a sample drawn by the State authorities of Massachusetts from goods offered for sale in the State.

MASSACHUSETTS AGRICULTURAL COLLEGE,

Amherst, Mass., February 20, 1880.

Americus Ammoniated Bone Superphosphate. *

<i>Moisture at 212°F</i>	14.70%
<i>Total Phosphoric Acid</i>	12.24%
<i>Soluble Phosphoric Acid</i>	9.21%
<i>Reverted Phosphoric Acid</i>	1.52%
<i>Insoluble Phosphoric Acid</i>	1.50%
Total Available Phosphoric Acid	10.73%
Potash	2.43%
Ammonia	3.24%

(Signed,) C. A. GOESSMAN, PH.D.

FEBRUARY,
1881



HAS
28 DAYS.

MOON'S PHASES.

	BOSTON.	NEW YORK.	WASH'TON.
	D. H. M.	H. M.	H. M.
F. Q.	5 8 10 A.	7 58 A.	7 46 A.
F. M.	14 1 40 M.	1 28 M.	1 16 M.
L. Q.	21 2 46 A.	2 34 A.	2 22 A.
N. M.	28 6 48 M.	6 36 M.	6 24 M.

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Del., Virginia and N. Carolina.

D. M.	D. W.	Historical Events.	Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
			H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	Tu	♂ ♀ ☾. ♀ in ♀. Texas seceded	7 13	5 15	8 54	7 10	5 19	8 53
2	W	Charleston captured, '65 ['61	7 12	5 17	10 4	7 9	5 20	10 2
3	Th	♂ ♀ ☾. H. Greeley born, 1811	7 11	5 18	11 12	7 8	5 21	11 9
4	Fr	♂ ♀ ☾. South. Con. formed '61	7 10	5 19	morn	7 7	5 22	morn
5	Sa	5th. ♂ ♀ ☾.	7 9	5 20	0 19	7 6	5 24	0 15
6	S	♀ sets, Bost. 9 h. 14 m. A.	7 8	5 22	1 22	7 5	5 25	1 17
7	M	Aaron Burr arrested, 1807	7 7	5 23	2 21	7 3	5 26	2 16
8	Tu	Annexation of Cal. procl'd, '47	7 5	5 24	3 15	7 2	5 27	3 9
9	W	Darnley killed 1567	7 4	5 26	4 3	7 1	5 28	3 57
10	Th	☾ in apogee.	7 3	5 27	4 45	7 0	5 30	4 40
11	Fr	♂ rises, Boston 5 h. 35 m. M.	7 1	5 28	5 21	6 59	5 31	5 17
12	Sa	Abraham Lincoln born, 1809	7 0	5 30	5 52	6 57	5 32	5 48
13	S	♀ sets, Boston, 9 h. 49 m. A.	6 58	5 31	6 20	6 56	5 33	6 17
14	M	14th. St. Valentine's Day	6 57	5 32	rises	6 55	5 35	rises
15	Tu	♂ ☾ ☾. Galileo born, 1654	6 56	5 33	7 19	6 53	5 36	7 19
16	W	♂ sets, Boston, 10 h. 12 m. A.	6 55	5 35	8 23	6 52	5 37	8 22
17	Th	☾ in ♀. Columbia, S. C., destr.	6 53	5 36	9 27	6 51	5 38	9 25
18	Fr	Vermont admitted, 1791 [1865	6 52	5 37	10 33	6 49	5 39	10 30
19	Sa	♂ rises, Boston, 6 h. 25 m. A.	6 50	5 38	11 40	6 48	5 41	11 36
20	S	♀ gr. elong. E. 46°.	6 49	5 40	morn	6 46	5 42	morn
21	M	21st. ☾ in perihelion.	6 47	5 41	0 48	6 45	5 43	0 43
22	Tu	♂ ♀ ☾. Washington's	6 46	5 42	1 55	6 44	5 44	1 50
23	W	♀ gr. elong. E. 18°. [birthday	6 44	5 43	2 56	6 42	5 45	2 50
24	Th	John Gutenberg died, 1468	6 43	5 45	3 50	6 41	5 47	3 45
25	Fr	♂ ♂ ☾. Battle of Trenton, 1776	6 41	5 46	4 35	6 39	5 48	4 31
26	Sa	☾ in perigee.	6 40	5 47	5 13	6 38	5 49	5 10
27	S	♂ sets, Bost. 10:59 m. A.	6 38	5 48	5 46	6 36	5 50	5 44
28	M	28th. ♂ ♀ ☾.	6 36	5 50	sets	6 35	5 51	sets
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...

NANUET, ROCKLAND CO., N. Y., Feb. 21, 1880.

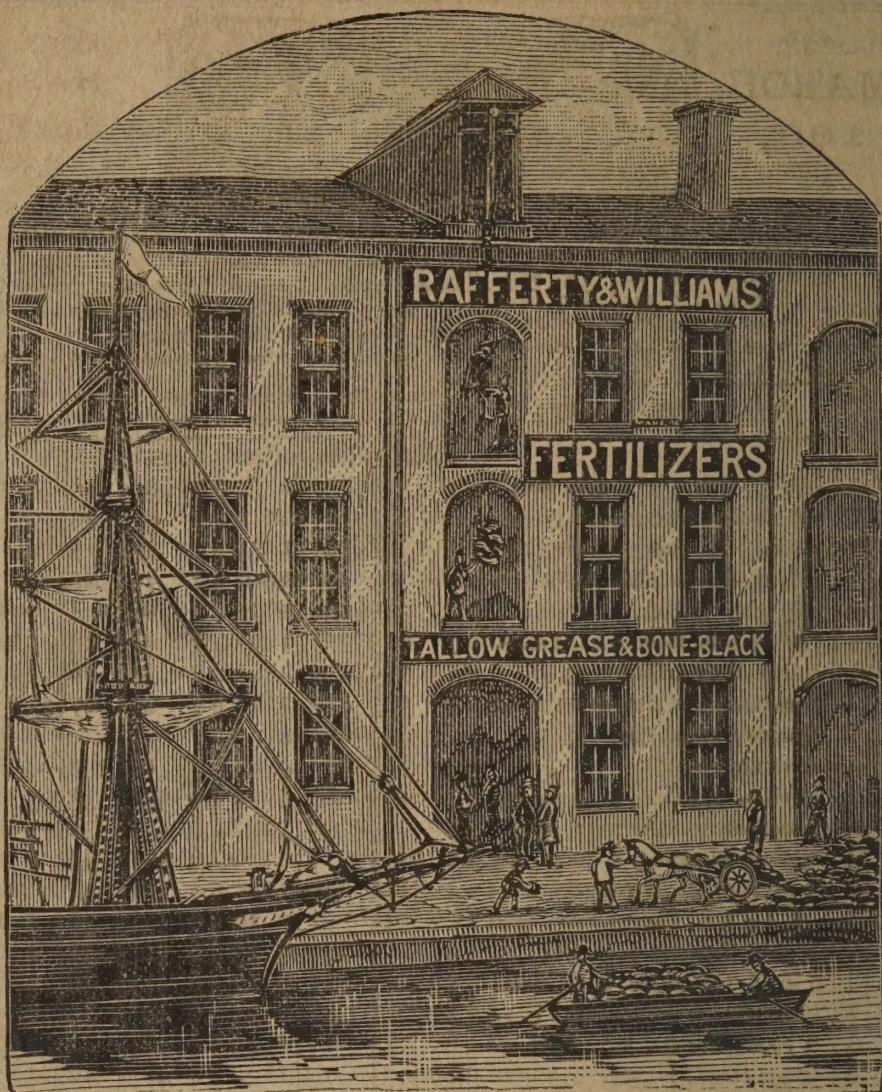
MESSRS. RAFFERTY & WILLIAMS.—*Gentlemen*: After using your Bone Flour and Potash on my grape vines, I found the sweetness and flavor to very much improve. The vines are looking very fine.

The Superphosphate I used on oats and potatoes did not have a fair trial, because of the drought just about the time they needed water.

The oats were quite well filled, but the straw was short.

Yours truly,

H. E. INSLEY.



The above represents our

BALTIMORE WAREHOUSE,

No. 95 Smith's Wharf, Baltimore, Md.

At this depot we keep a general stock of our goods on hand for distributing to our customers in Maryland, southern Pennsylvania, northern Virginia, and West Virginia, as well as for the retail trade of Baltimore. We are thus enabled to make more prompt shipments to the above localities. This Warehouse is in charge of our agents,

Messrs. L. KELLUM & CO.,

Office, 119 Hillen St., Baltimore, Md.

MARCH,
1881



HAS
31 DAYS.

MOON'S PHASES.

	BOSTON.		NEW YORK.		WASH'TON.	
	D.	H. M.	H. M.	H. M.	H. M.	H. M.
F. Q.	7	3 18 A.	3 6 A.	2 54 A.		
F. M.	15	5 53 A.	5 41 A.	5 29 A.		
L. Q.	22	10 46 A.	10 34 A.	10 22 A.		
N. M.	29	5 48 A.	5 36 A.	5 24 A.		

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Del., Virginia and N. Carolina.

D. M. D. W.

Historical Events.

Sun rises		Sun sets		Moon sets		Sun rises		Sun sets		Moon sets	
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
6 35	5 51	7 40	6 33	5 52	7 39	6 33	5 52	7 39	6 32	5 53	8 49
6 32	5 53	10 0	6 32	5 53	9 57	6 30	5 54	9 57	6 29	5 55	11 2
6 30	5 54	11 6	6 28	5 56	morn	6 27	5 57	morn	6 26	5 58	0 4
6 27	5 57	0 9	6 25	5 58	1 6	6 24	5 59	1 1	6 22	6 0	1 50
6 23	5 59	1 56	6 21	6 0	2 40	6 21	6 1	2 35	6 19	6 2	3 14
6 20	6 1	3 19	6 18	6 3	3 53	6 17	6 3	3 49	6 16	6 4	4 19
6 16	6 4	4 22	6 15	6 5	4 49	6 14	6 5	4 47	6 13	6 6	5 13
6 13	6 6	5 14	6 11	6 7	rises	6 11	6 8	rises	6 9	6 9	7 15
6 9	6 8	7 17	6 8	6 10	8 24	6 8	6 10	8 21	6 6	6 11	9 28
6 6	6 11	9 32	6 4	6 12	10 41	6 4	6 12	10 36	6 3	6 13	11 43
6 3	6 13	11 48	6 1	6 14	morn	6 1	6 14	morn	5 59	6 15	0 44
5 59	6 15	0 49	5 57	6 16	1 43	5 58	6 16	1 38	5 56	6 17	2 25
5 56	6 17	2 30	5 54	6 18	3 10	5 54	6 18	3 6	5 52	6 20	3 42
5 52	6 20	3 44	5 50	6 21	4 15	5 51	6 20	4 14	5 49	6 21	4 44
5 49	6 22	4 44	5 47	6 23	sets	5 48	6 22	sets	5 46	6 23	7 36
5 45	6 24	7 39	5 43	6 25	8 47	5 44	6 24	8 43			

1	Tu	8 ☉ ☉. 6 ♀.
2	W	☿ stat. 6 ♀. Ask Wedn'y.
3	Th	6 ♀. 6 ♀. Florida adm.
4	Fr	☿ gr. hel. lat. N. 6 ♀. [45
5	Sa	♀ sets, Boston, 9 h. 54 m. A.
6	S	♀ in perih. 1st Sund. in Lent
7	M	7th. Webster's Speech, '50
8	Tu	♂ rises, Bost. 4:59 m. M.
9	W	Scott at Vera Cruz, 1847
10	Th	☿ in apogee.
11	Fr	☿ ☿ inf. Philad'a incor. 1789
12	Sa	First Penn. Assembly, 1683
13	S	♀ sets, Boston, 8 h. 29 m. A.
14	M	6 ☉. A. Jackson born, 1767
15	Tu	15th. Maine adm. 1820
16	W	James Madison b., 1789
17	Th	St. Patrick's Day.
18	Fr	Calhoun born, 1782
19	Sa	♂ sets, Boston, 8 h. 27 m. A.
20	S	☉ enters ♀. Spring begins.
21	M	Botany Bay settled, 1787
22	Tu	22d. ☉ sets, Boston, 5 h.
23	W	6 ♀. [19 m. M.
24	Th	☿ stat. Queen Eliz. died 1613
25	Fr	☿ in perigee. Annunciation.
26	Sa	6 ♀. Gov. Winthrop d. 1640
27	S	☿ in ♀. ♀ at gr. brilliancy
28	M	6 ♀. ♀ gr. hel. lat. N.
29	Tu	29th. ♀ sets, Bost. 9 h.
30	W	6 ♀. [5 m. A.
31	Th	6 ♀. J. C. Calhoun d., 1851

LOCKPORT, N. Y., September 15, 1880.

MR. ARTHUR S. CORE,
NEW YORK, N. Y.

Yours received. We know your "Universal Brand" Fertilizer has given the best results; hear good accounts wherever we have sold it; where we sold here they call for it again, and their neighbors call for it, seeing the good results. One farmer tested three kinds, and the Universal was best: we now have full confidence.

Truly yours,

W. E. SCHAEFFER.



AMMONIATED DISSOLVED BONES.

We need say but few words in praise of this universally used material, as its merits are so well known and recognized wherever chemical manures are used. It has given

UNIVERSAL SATISFACTION.

The ingredients used in its manufacture, as its name signifies, are

**PURE DISSOLVED BONES,
ANIMAL MATTER, BLOOD, AND POTASH.**

These materials are united in the proportions we consider best adapted for use on all growing crops, and although special manures may answer in some cases, we think a general manure is becoming the most popular with our farmers. This is an

EXCELLENT FERTILIZER

for wheat, and we desire to take this opportunity to assure our many customers that by our present process of manufacture the stock will be delivered in a dry and good mechanical condition.

SUITABLE FOR DRILLING.

No pains will be spared to keep this fertilizer up to its high standard of excellence and make it rank with the best. We give below an analysis and as compared with *guarantee*, which certainly shows that it has been fully maintained.

“MESSRS. RAFFERTY & WILLIAMS,

New York, Oct. 20, 1880.

The sample of Universal Ammoniated Dissolved Bone drawn from your stock in bulk at factory, Hunter's Point, L.I., contains

<i>Moisture</i>	13.70%
<i>Total Phosphoric Acid</i>	11.02%
<i>Soluble Phosphoric Acid</i>	6.97%
<i>Reverted Phosphoric Acid</i>	3.47%
<i>Insoluble Phosphoric Acid</i>	0.58%
Total Available Phosphoric Acid	10.44%
Potash	2.49%
Ammonia	2.71%

(*Signed*,) **A. R. Ledoux & Co., Chemists & Assayers.**

GUARANTEED ANALYSIS.

Ammonia	2 to 3%
Available Phosphoric Acid	8 to 10%
Potash	2 to 3%

APRIL,
1881



HAS
30 DAYS.

MOON'S PHASES.

	BOSTON.			NEW YORK.			WASH'TON.		
F. Q.	D.	H.	M.	D.	H.	M.	D.	H.	M.
6	11	10	M.	10	58	M.	10	46	M.
F. M.	14	7	6 M.	6	54	M.	6	42	M.
L. Q.	21	4	54 M.	4	42	M.	4	30	M.
N. M.	28	5	40 M.	5	28	M.	5	16	M.

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Del., Virginia and N. Carolina.

D. M.	D. W.	
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Historical Events.

1	Fr	♂Ψ♂. ♂♀♂. Bismarck b. '14
2	Sa	♀ sets, Boston, 9 h. 48 m. A.
3	S	Washington Irving born, 1783
4	M	First Newspaper in Amer. 1704
5	Tu	Nantucket plundered, 1779
6	W	♂ 6th. ♀ in aph. ♂ in apog.
7	Th	♂ gr. elong. W., 28°.
8	Fr	Louisiana admitted, 1812
9	Sa	♂ rises, Boston, 3 h. 57 m. M.
10	S	♂♂♂. Palm Sunday.
11	M	♀ stat. Fort Sumter bomb. '61
12	Tu	Henry Clay born, 1777
13	W	♀ sets, Boston, 7 h. 5 m. A.
14	Th	14th. Lincoln assassint'd
15	Fr	Good Friday. [1865
16	Sa	Battle of Culloden, 1746
17	S	Easter Sunday. ♀ sets, Bost.
18	M	Bat. Cerro Gordo, '47 [6:52 A.
19	Tu	♂ in perigee.
20	W	♂ sets, Boston, 3 h. 27 m. M.
21	Th	21st. ♂h♂.
22	Fr	♂h♀. ♂4♂.
23	Sa	Stephen A. Douglas born, 1813
24	S	♂♂♂. Low Sunday.
25	M	Printing invented, 1414
26	Tu	♂♂♂. ♀ gr. hel. lat. S.
27	W	♂h♂. ♂4♂. [28. ♂♂♂.
28	Th	28th. ♂Ψ♀. ♂Ψ♂.
29	Fr	Ψ sets, Bost. 7 h. 8 m. A.
30	Sa	Washington inaugurated, 1789

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
5 42	6 26	9 52	5 43	6 25	9 47
5 40	6 28	10 52	5 41	6 26	10 47
5 38	6 29	11 47	5 39	6 27	11 42
5 36	6 30	morn	5 38	6 28	morn
5 35	6 31	0 35	5 36	6 29	0 30
5 33	6 32	1 16	5 35	6 30	1 11
5 31	6 33	1 51	5 33	6 32	1 47
5 30	6 34	2 22	5 31	6 33	2 19
5 28	6 35	2 50	5 30	6 34	2 48
5 26	6 36	3 15	5 28	6 35	3 14
5 25	6 38	3 39	5 27	6 36	3 39
5 23	6 39	4 4	5 25	6 37	4 5
5 21	6 40	4 31	5 24	6 38	4 33
5 20	6 41	rises	5 22	6 39	rises
5 18	6 42	8 28	5 20	6 40	8 24
5 17	6 43	9 37	5 19	6 41	9 32
5 15	6 44	10 42	5 17	6 42	10 37
5 14	6 45	11 40	5 16	6 43	11 35
5 12	6 46	morn	5 14	6 44	morn
5 10	6 48	0 29	5 13	6 45	0 24
5 9	6 49	1 10	5 11	6 46	1 6
5 7	6 50	1 45	5 10	6 47	1 42
5 6	6 51	2 16	5 9	6 48	2 18
5 4	6 52	2 45	5 7	6 49	2 45
5 3	6 53	3 13	5 6	6 50	3 14
5 1	6 54	3 42	5 4	6 51	3 44
5 0	6 55	4 12	5 3	6 52	4 15
4 59	6 56	sets	5 2	6 53	sets
4 57	6 58	8 38	5 0	6 54	8 33
4 56	6 59	9 35	4 59	6 55	9 30

RUSHVILLE, YATES Co., N. Y., December 9, 1880.

RAFFERTY & WILLIAMS.

Gentlemen:—I used your Universal Ammoniated Dissolved Bone on barley in different fields by the side of two other kinds. I think I got one third more barley per acre by using your fertilizer. In proof of its quality I got your brand to sow with my wheat last Fall. Shall use a quantity in the Spring on barley and corn.

Yours respectfully,

WILLIAM SILVERNAIL.

"AMERICUS"

DISSOLVED ANIMAL BONES

is the pure bones of animals that are first steamed, to take the grease out, and afterwards treated with pure acid. Being made of the *raw bones*, or green bones, this is a much more valuable fertilizer than if made of the bleached bones that are collected through the country, which by long weathering have lost much virtue.

We warrant this article to be

ABSOLUTELY PURE,

and as offered for sale. It is dry and fine, specially adapted for *use in the drill*. It is the

GREAT WHEAT FERTILIZER,

and for this crop we can say it is unsurpassed. Many farmers use this as the base of their fertilizers, mixing with it blood and potash salts. Having these materials on hand we can at all times supply them pure and in the proportions for mixing. The

GUARANTEED ANALYSIS

OF THE

DISSOLVED ANIMAL BONES

is as follows :

Ammonia.....	2½ to 3½ %
Available Phosphoric Acid.....	12 to 15 %

Actual analysis made, New York, June 22, 1880, of the "Americus" Dissolved Animal Bones :

Moisture.....	10.15 per cent.
Ammonia.....	3.16 "
Soluble Phosphoric Acid.....	10.50 "
Reverted " "	3.77 "
Total available Phosphoric Acid..	14.27 per cent.
Insoluble " " ..	1.14 "

Total, " " .. 15.41 "

(Signed)

A. R. LEDOUX & CO.,

Chemists and Assayers.

OUR GUARANTEE IS THUS WELL MAINTAINED.

MAY,
1881



HAS
31 DAYS.

MOON'S PHASES.

	BOSTON.			NEW YORK.		WASH'TON	
	D. H. M.			H. M.		H. M.	
F. O.	6	6	0 M.	5	48 M.	5	36 M.
F. M.	13	5	40 A.	5	28 A.	5	16 A.
L. O.	20	10	23 M.	10	11 M.	9	59 M.
N. M.	27	6	52 A.	6	40 A.	6	28 A.

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Dela., Virginia and N. Carolina.

D. M.	D. W.	
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Historical Events.

1	S	Battle of Monticello, 1863
2	M	♂ gr. hel. lat. S.
3	Tu	♂ ♀ ⊙ inf. W. H. Prescott b.,
4	W	♂ ♀ ⊙. ☾ in apogee. [1796
5	Th	♀ rises, Boston, 4 h. 18 m. M.
6	Fr	♂ 6th. ♂ ♀ h.
7	Sa	♂ ♀ ♄. Arkansas sec. '61
8	S	♂ ☾. ♂ ♀ ♀.
9	M	♂ rises, Boston, 2 h. 53 m. M.
10	Tu	♂ ♄ ♀. Jeff. Davis capt'd, '65
11	W	♂ ♀ ♄. Minnesota adm'd 1858
12	Th	Jamestown settled, 1607
13	Fr	☺ 13th. J. Smith in Virginia
14	Sa	☺ ♄ rises, Bost., 4 h. 4 m. M.
15	S	♂ h ♀. ☿ in ☾.
16	M	♂ stationary. ☾ in perigee.
17	Tu	♂ ♀ ☺ sup. John Jay died, '29
18	W	h rises, Boston, 3 h. 47 m. M.
19	Th	Peace with Mexico, 1848
20	Fr	☾ 20th. ☿ in perihelion.
21	Sa	☾ California ceded U. S., '48
22	S	Rogation Sunday. ☾ sets, B.,
23	M	♂ ♀ ☾. ♀ in ☿. [1 h. 17 m. M.
24	Tu	♀ stat. B. of Winchester, '62
25	W	♂ ♀ ☾. ♂ h ☾. ♂ ♄ ☾.
26	Th	♂ ♀ ☾. ♂ in perih. Asc'n Day
27	Fr	☺ 27th. Fort Erie taken, '13
28	Sa	☺ ☿ ☾. N. Webster d., 43
29	S	♂ rises, Boston, 3 h. 28 m. M.
30	M	☺ ☾ ☺. Decoration Day.
31	Tu	♂ gr. hel. lat. N.

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
4 54	7 0	10 26	4 58	6 56	10 21
4 53	7 1	11 10	4 57	6 57	11 5
4 52	7 2	11 48	4 55	6 58	11 44
4 50	7 3	morn	4 54	7 0	morn
4 49	7 4	0 21	4 53	7 1	0 17
4 48	7 5	0 50	4 52	7 2	0 47
4 47	7 6	1 16	4 51	7 3	1 14
4 46	7 8	1 40	4 49	7 4	1 39
4 44	7 9	2 4	4 48	7 5	2 4
4 43	7 10	2 30	4 47	7 6	2 31
4 42	7 11	2 58	4 46	7 7	3 0
4 41	7 12	3 30	4 45	7 8	3 33
4 40	7 13	4 9	4 44	7 9	4 13
4 39	7 14	rises	4 43	7 10	rises
4 38	7 15	9 30	4 42	7 11	9 25
4 37	7 16	10 24	4 41	7 11	10 19
4 36	7 17	11 10	4 40	7 12	11 6
4 35	7 18	11 47	4 40	7 13	11 44
4 34	7 19	morn	4 39	7 14	morn
4 33	7 20	0 19	4 38	7 15	0 17
4 32	7 21	0 48	4 37	7 16	0 47
4 32	7 22	1 16	4 36	7 17	1 16
4 31	7 23	1 44	4 36	7 18	1 46
4 30	7 24	2 13	4 35	7 19	2 16
4 29	7 25	2 44	4 34	7 19	2 48
4 28	7 26	3 19	4 34	7 20	3 23
4 28	7 26	4 0	4 33	7 21	4 5
4 27	7 27	sets	4 32	7 22	sets
4 27	7 28	9 5	4 32	7 23	9 0
4 26	7 29	9 46	4 31	7 23	9 41
4 26	7 30	10 21	4 31	7 24	10 17

SPENCERPORT, MONROE Co., N. Y., November 2, 1880.

MESSRS. RAFFERTY & WILLIAMS,

NEW YORK.

Gentlemen:—The Superphosphate branded "Universal," manufactured by you and sold by me to eight or ten farmers in this vicinity last Spring, gave entire satisfaction in every instance. I look for a greatly increased sale of the goods next Spring.

Yours respectfully,

H. H. GOFF.

"AMERICUS"

PURE BONE FLOUR.

IS MADE from Fresh *Steamed* Butcher and Slaughter-house Bones. We get the Cattle Skulls, Sheep Heads, and Market Bones in a fresh condition, and steam them to extract the grease ; after being steamed and dried, they are ground to a *Flour*. It is a **perfectly pure bone** ; no salt of any kind is added to act as a dryer or to bleach the bone.

Steamed bone, on account of its softness and friable nature, is more valuable for fertilizing purposes than the so-called raw bone, which, in most cases, is really boiled bone. Owing to the fact that the green bones cannot be entirely freed from all adhering meat before being steamed, the *Americus Bone* has generally a somewhat darker appearance than the ground bones from the West or Texas, which have been weathered and bleached by exposure on the plains, and which are not as valuable or active as a fertilizer as fresh bone which has been steamed.

The Phosphoric Acid of Steamed Bones is in a condition to become almost at once available to plants. The eminent Agricultural Chemist, Prof. O. W. Atwater, of the Connecticut Experimental Station, in his Report to the Board of Agriculture, states :

" Fine Bone can be more uniformly diffused throughout the soil, and quickly used by the crop, and thus brings a much speedier return for the money it costs. In rates of valuation current in Germany, where these objects have received much more attention than with us Nitrogen in *coarse raw bone* is recognized at about $2\frac{1}{4}$ cents per pound, while in *steamed*, finely powdered bone dust, it is rated at about 21 cents per pound.

" There is a common but erroneous impression that steamed bone is less valuable than raw bone. It is true that in the process of boiling or steaming bones, to remove fat or 'grease', there is always some loss of nitrogen, but as the total weight is decreased without any considerable loss of phosphoric acid, and but little loss of nitrogen, the percentage of these are found in practice not to vary greatly from those in pure bone. The steamed bone is left in a very friable condition, so that, being more easily ground, it is usually much finer, and much more quickly available to plants. In brief, *fine bone* is much more valuable than *coarse* ; and *steamed*, than *raw*. The effect of finely ground steamed bone may not be manifest during more than three or four years, while that of coarse fragments of raw bone will be much less marked, but may last a life time."

JUNE

1881



HAS

30 DAYS.

MOON'S PHASES

	BOSTON.			NEW YORK.			WASH'TON.		
	D.	H.	M.	H.	M.		H.	M.	
F. Q.	4	10	35 A.	10	23 A.		10	11 A.	
F. M.	12	2	13 M.	2	1 M.		1	49 M.	
L. Q.	18	4	35 A.	4	23 A.		4	11 A.	
N. M.	26	9	19 M.	9	7 M.		8	55 M.	

LATITUDE
Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE
Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Dela., Virginia and N. Carolina.

D.	D.	
M.	W.	

Historical Events.

1	W	☾ in apogee.
2	Th	☿ rises, Boston, 2 h. 46 m. M.
3	Fr	Mexican War declared, 1846
4	Sa	☾ 4th. ☾☾☾. [Sunday
5	S	☾☿☿. Pentecost. Whit
6	M	♂ rises, Boston, 1 h. 49 m. M.
7	Tu	First American Congress, 1765
8	W	Gen. Jackson died, 1845
9	Th	☿ at gr. brilliancy.
10	Fr	Battle of Big Bethel, 1861
11	Sa	John Franklin died 1847.
12	S	☼ 12th. Trinity Sunday.
13	M	☾ in perigee.
14	Tu	American Flag adopted, 1777
15	W	Pres. Polk died, 1849
16	Th	Corpus Christi.
17	Fr	♂ rises, Boston, 1 h. 58 m. M.
18	Sa	☾ 18th. ☾♂♂.
19	S	☾☿♂. ☾♂♀.
20	M	☿ gr. elong. E. 25°.
21	Tu	☼ ent. ☼. Summer beg. ☾♂☼.
22	W	☾♂☼. ☾♂☼. ☾♀☼. [☾♂☼
23	Th	☿ in ☿. Battle of Plassey, 1755
24	Fr	St. John, Baptist.
25	Sa	♂ sets, Boston, 11 h. 1 m. A.
26	S	☼ 26th. ♀ in aphelion.
27	M	☼ Vicksburg bombarded, '62
28	Tu	☾☿☼. ☼ in apogee.
29	W	Henry Clay died, 1852
30	Th	♂ rises, Boston, 1 h. 24 m. M.

Sun	Sun	Moon
rises	sets	sets
H. M.	H. M.	H. M.
4 25	7 30	10 51
4 25	7 31	11 18
4 24	7 32	11 42
4 24	7 32	morn
4 24	7 33	0 6
4 23	7 34	0 30
4 23	7 34	0 56
4 23	7 35	1 26
4 23	7 36	2 1
4 22	7 36	2 44
4 22	7 37	3 34
4 22	7 37	rises
4 22	7 38	9 3
4 22	7 38	9 44
4 22	7 38	10 20
4 22	7 39	10 51
4 22	7 39	11 20
4 23	7 39	11 48
4 23	7 40	morn
4 23	7 40	0 17
4 23	7 40	0 48
4 23	7 40	1 21
4 24	7 40	1 59
4 24	7 40	2 43
4 24	7 40	3 33
4 25	7 40	sets
4 25	7 40	8 22
4 25	7 40	8 53
4 26	7 40	9 20
4 26	7 40	9 46

Sun	Sun	Moon
rises	sets	sets
H. M.	H. M.	H. M.
4 30	7 25	10 48
4 30	7 26	11 16
4 30	7 26	11 41
4 29	7 27	morn
4 29	7 28	0 6
4 29	7 28	0 31
4 29	7 29	0 58
4 28	7 29	1 29
4 28	7 30	2 5
4 28	7 31	2 49
4 28	7 31	3 39
4 28	7 31	rises
4 28	7 32	8 58
4 28	7 32	9 41
4 28	7 33	10 18
4 28	7 33	10 50
4 28	7 33	11 20
4 28	7 34	11 49
4 28	7 34	morn
4 29	7 34	0 19
4 29	7 34	0 51
4 29	7 34	1 25
4 29	7 35	2 4
4 30	7 35	2 48
4 30	7 35	3 38
4 30	7 35	sets
4 31	7 35	8 18
4 31	7 35	8 50
4 32	7 35	9 17
4 32	7 35	9 44

ANALYSIS OF AMERICUS PURE BONE FLOUR.

MASSACHUSETTS AGRICULTURAL COLLEGE.

Amherst, Mass., Feb. 20, 1880.

Moisture	3.60%
Bone Phosphate of Lime	49.77%
Equivalent to Phosphoric Acid	22.80%
Ammonia	4.13%



The above represents our
Rochester Warehouse.

At this Depot, No. 6 South Washington St., we supply the Western part of the State of New York; here our customers will find a stock on hand during the season. Owing to the unsurpassed shipping facilities we have at New York City, by means of our own boats, to the various railroads, diverging to all parts of the State, unless for the immediate vicinity of Rochester, it is much better to send orders direct to our New York Office. Customers near Rochester will find it a great convenience to have stock concentrated at this point, especially in the fall, when fertilizers are wanted with the least possible delay.

The deliveries from Rochester are in charge of our Agent, H. W. MARSELLUS,
164 & 166 West Main St., Rochester, N. Y.

JULY

1881



HAS

31 DAYS.

MOON'S PHASES.

	BOSTON.		NEW YORK.		WASH'TON.	
	D.	H. M.	H. M.	A.	H. M.	A.
F. Q.	4	0 32 A.	0 20 A.	0 8 A.		
F. M.	11	9 29 M.	9 17 M.	9 5 M.		
L. Q.	18	0 50 M.	0 38 M.	0 26 M.		
N. M.	26	0 35 M.	0 23 M.	0 11 M.		

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Del., Virginia and N. Carolina.

D. M.	D. W.	
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Historical Events.

1	Fr	☉ in apogee.
2	Sa	♂♂. Quebec founded, 1608
3	S	♀ in aphel.
4	M	4th. ♀ stat. <i>Indep. Day</i>
5	Tu	♀ rises, Bost., 1:50 m. M.
6	W	♂♂h. Moore executed, 1535
7	Th	Commodore Perry died, 1855
8	Fr	♂ gr. hel. lat. N.
9	Sa	♂ rises, Boston, o h. 38 m. M.
10	S	Morris' Island taken, 1863
11	M	☾ 11th. ☾ in perigee.
12	Tu	♀ gr. elong. W. 46°.
13	W	☾ rises, Boston, o h. 42 m. M.
14	Th	♂♂♂. 2d Gr. Fire Chicago, '74
15	Fr	Monmouth executed, 1685
16	Sa	h rises, Boston, o h. 11 m. M.
17	S	♂♂☉ inf. Bishop White died,
18	M	18th. ♂h. ☾. [1836
19	Tu	♀ gr. hel. lat. S. ♂♂☾;
20	W	♂♂☾. [19. ♂♂☾.
21	Th	♂♀☾. Battle of Bull Run, '61
22	Fr	♂♂♂. R. R. Riots, Pittsb., '77
23	Sa	♀ gr. hel. lat. S.
24	S	♂♀☾. Pr. Van Buren d., '62
25	M	Farragut made Admlal 1866
26	Tu	☾ 26th ☾ in apogee.
27	W	☾ stationary.
28	Th	♂ sets, Boston, 8 h. 55 m. A.
29	Fr	♂♂☾. John Slidell died, 1871
30	Sa	Westfield Explosion, 1871
31	S	♂ rises, Boston 11 h. 20 m. A.

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
4 27	7 40	10 11	4 32	7 35	10 10
4 27	7 40	10 35	4 33	7 34	10 35
4 28	7 40	10 59	4 33	7 34	11 0
4 29	7 39	11 25	4 34	7 34	11 28
4 29	7 39	11 57	4 35	7 34	morn
4 29	7 39	morn	4 36	7 33	0 0
4 30	7 38	0 35	4 36	7 33	0 39
4 31	7 38	1 20	4 37	7 33	1 25
4 32	7 38	2 15	4 38	7 32	2 20
4 33	7 37	3 20	4 38	7 32	3 25
4 33	7 37	rises	4 39	7 32	rises
4 34	7 36	8 17	4 39	7 31	8 14
4 35	7 36	8 51	4 40	7 31	8 49
4 36	7 35	9 22	4 41	7 30	9 21
4 37	7 34	9 51	4 42	7 29	9 52
4 38	7 34	10 20	4 42	7 29	10 22
4 38	7 33	10 50	4 43	7 28	10 53
4 39	7 32	11 23	4 44	7 28	11 27
4 40	7 32	morn	4 45	7 27	morn
4 41	7 31	0 0	4 46	7 26	0 5
4 42	7 30	0 42	4 47	7 25	0 47
4 43	7 29	1 29	4 47	7 24	1 34
4 44	7 28	2 21	4 48	7 24	2 26
4 45	7 27	3 17	4 49	7 23	3 22
4 46	7 26	4 14	4 50	7 22	4 18
4 47	7 25	sets	4 51	7 21	sets
4 48	7 24	7 52	4 52	7 20	7 50
4 49	7 23	8 15	4 53	7 19	8 14
4 50	7 22	8 39	4 54	7 18	8 39
4 51	7 21	9 3	4 55	7 17	9 4
4 52	7 20	9 29	4 56	7 16	9 31

LOUISVILLE, ST. LAWRENCE CO., N. Y., July 19, 1880.

H. K. BALDWIN, Esq., Potsdam, N. Y.

Dear Sir: Enclosed I send you twenty dollars to pay for half ton of Rafferty & Williams' Universal Ammoniated Dissolved Bone, had on the 18th of May. I am well satisfied with the results; the corn is looking splendid and shows a marked difference from that on which no Fertilizer was used.

Respectfully,

JAMES MILLER.

“COMMONWEALTH”

BONE MEAL.

THIS ARTICLE of Bone is made of the softer portions of the Bone Stock, and contains as well some animal matter. It will be found quick in its action, and specially well adapted for

Spring Crops and Wheat,

Where a Cheap Article of Bone is required. On some lands this grade of Bone gives better results than even our high grade of Bone Flour. We candidly believe that it cannot be surpassed in quality for the money.

THE FOLLOWING IS OUR GUARANTEED ANALYSIS :

Bone Phosphate of Lime.....	25 to 35 percent.
Ammonia	2½ to 3½ “

This Bone Meal will be found in good mechanical condition, dry and suitable for drilling.

QUANTITY OF SEED USUALLY SOWN TO AN ACRE.

Herdgrass Timothy, ¼ to ½ bus.	Carrot.....2½ to 3 lbs.
Redtop..... ½ to 1 “	Beet.....4 to 6 “
Red Clover.....6 to 10 lbs.	Parsnip.....3 to 6 “
White Clover.....5 to 8 “	Onion.....4 to 6 “
Lucerne..... 10 “	Ruta Baga..... 1 “
Orchard Grass....1 to 1½ bus.	Turnip.....1½ to 1 “
Blue Grass..... ½ to 1 “	Beans.....1½ to 2 bus.
Rye Grass.....1 to 1½ “	Pear.....1½ to 2 “
Wheat.....1½ to 2 “	Oats.....2 to 3 “
Barley.....1½ to 2 “	Rye.....1¼ to 1½ “
Buckwheat.....1 to 1½ “	Millet..... ½ to ¾ “

AUGUST,
1881



HAS
31 DAYS.

MOON'S PHASES.

	BOSTON.			NEW YORK.			WASH'TON.		
	D.	H.	M.	H.	M.	H.	M.		
F. Q.	2	11	58 A.	11	46 A.	11	34 A.		
F. M.	9	4	23 A.	4	11 A.	3	59 A.		
L. Q.	16	0	14 A.	0	2 A.	11	50 M.		
N. M.	24	4	1 A.	3	49 A.	3	37 A.		

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Del., Virginia and N. Carolina.

Historical Events.

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
4 53	7 19	9 58	4 57	7 15	10 1
4 54	7 18	10 32	4 58	7 14	10 36
4 55	7 16	11 12	4 59	7 13	11 17
4 56	7 15	morn	5 0	7 12	morn
4 57	7 14	0 0	5 1	7 10	0 5
4 58	7 13	0 59	5 2	7 9	1 4
4 59	7 11	2 8	5 2	7 8	2 13
5 0	7 10	3 23	5 3	7 7	3 27
5 1	7 9	rises	5 4	7 5	rises
5 2	7 7	7 19	5 5	7 4	7 18
5 3	7 6	7 50	5 6	7 3	7 50
5 4	7 4	8 20	5 7	7 1	8 21
5 5	7 3	8 51	5 8	7 0	8 53
5 6	7 2	9 24	5 9	6 59	9 27
5 7	7 0	10 0	5 10	6 57	10 4
5 8	6 59	10 40	5 11	6 56	10 45
5 10	6 57	11 26	5 12	6 54	11 31
5 11	6 56	morn	5 13	6 53	morn
5 12	6 54	0 17	5 14	6 51	0 22
5 13	6 53	1 12	5 15	6 50	1 17
5 14	6 51	2 9	5 16	6 48	2 13
5 15	6 50	3 7	5 17	6 47	3 11
5 16	6 48	4 6	5 18	6 45	4 9
5 17	6 46	sets	5 19	6 44	sets
5 18	6 45	6 44	5 20	6 42	6 44
5 19	6 43	7 9	5 21	6 41	7 10
5 20	6 41	7 35	5 22	6 39	7 37
5 21	6 40	8 2	5 23	6 38	8 5
5 22	6 38	8 33	5 24	6 36	8 37
5 23	6 37	9 11	5 25	6 35	9 16
5 24	6 35	9 56	5 26	6 33	10 1

D. M.	D. W.	
1	M	Colorado admitted, 1876
2	Tu	2d. ♀ rises, Bost., 1:37 M.
3	W	Columbus set sail, 1492
4	Th	☐☐☉. Iowa admitted, 1846
5	Fr	Atlantic Cable laid, 1858
6	Sa	♂ gr. elong. W. 19°.
7	S	♂ rises, Boston, 11 h. 39 m. A.
8	M	☐☐☉. B. of Mackinaw, 1814
9	Tu	☉☉. ☐ in perigee. [1846
10	W	☉☉. Smithsonian Inst. org'd,
11	Th	Davis' Straits discovered, 1585
12	Fr	♂ in ☉. Att. on Stonington, '14
13	Sa	☐ rises, Boston, 10 h. 50 m. A.
14	S	Oregon a Territory, 1848
15	M	♂☐☉. ☐☐☉.
16	Tu	☐☉. ♀ in perih. ☐☐☉.
17	W	☐☐☉. ☐☐☉.
18	Th	☐ rises, Boston, 10 h. 2 m. A.
19	Fr	☐ stationery.
20	Sa	♂☐☉. B. of Cherubusco, 1847
21	S	Missouri admitted, 1821
22	M	☐ in apogee.
23	Tu	♂☐☉. Cuvier born, 1769
24	W	☐☉. ☐ stationery.
25	Th	☐☐☉. Herschel d, 1822
26	Fr	♂ gr. hel. lat. N.
27	Sa	☐ sets, Boston, 7 h. 0 m. A.
28	S	Delaware Bay discovered, 1609
29	M	Brigham Young died, 1877
30	Tu	☐ rises, Boston, 9 h. 23 m. A.
31	W	♂☐☉ sup.

WOODBURY, L. I., November 30, 1880.

FRANK PHILLIPS, Esq.

Dear Sir:—I used two tons of the Universal Dissolved Bone made by Rafferty & Williams (which you sold me) on my wheat last year, and the wheat was the finest ever raised by me on this place. The corn fertilizer also gave excellent satisfaction, and I can recommend Rafferty & Williams' Fertilizers as the best I have ever used.

Respectfully yours,

ISAAC H. JONES.

PLAIN CHEMISTRY

FOR

FARMERS AND PLANTERS.

NITROGEN is, commercially, the most valuable fertilizing element. It occurs in various forms and states. *Organic nitrogen* is the nitrogen of animal and vegetable matters generally, existing in the albumen and fibrine of *meat* and *blood*, in the uric acid of bird dung, in the urea and hippuric acid of urine, and in a number of other substances. Some forms of organic nitrogen, as that of blood and meat, are highly active as fertilizers; others, as that of hair and leather, are comparatively slow in their effect on vegetation, unless these matters are reduced to a fine powder or chemically disintegrated. *Ammonia* and *nitric acid* are the results of decay of organic nitrogen in the soil and manure heap, and are the most active forms of nitrogen. They occur in commerce—the former in sulphate of ammonia, the latter in nitrate of soda.

Seventeen parts of *ammonia* contain fourteen parts of *nitrogen*.

SOLUBLE PHOSPHORIC ACID implies phosphoric acid that is freely soluble in water. It is the characteristic ingredient of superphosphates, in which it is produced by acting on “insoluble” or “reverted” phosphates with oil of vitriol. It is not only readily taken up by plants, but it is distributed through the soil by rains. Once readily incorporated with soil it shortly becomes reverted phosphoric acid.

REVERTED (*reduced or precipitated*) PHOSPHORIC ACID, means strictly phosphoric acid that was once freely soluble in water, but from chemical change has become insoluble in the liquid. It is freely taken up by a strong solution of ammonium citrate, which is therefore used in analysis to determine its quantity. “*Reverted phosphoric acid*” implies phosphates that are readily assimilated by crops, but have less value than soluble phosphoric acid, because they do not distribute freely by rain.

AVAILABLE PHOSPHORIC ACID consists of the *soluble* and *reverted*.

INSOLUBLE PHOSPHORIC ACID implies various phosphates not freely soluble in water or ammonium citrate. In some cases the phosphoric acid is too insoluble to be readily available as plant food. This is true of the South Carolina rock phosphate of Navassa phosphate, and especially of Canada apatite. The phosphate of raw bones is nearly insoluble, in this sense, because of the animal matter of the bone, which envelopes it, but when the latter decays in the soil the phosphate remains in essentially the “reverted” form.

One hundred and fifty-five parts of bone phosphate contain seventy-one parts of phosphoric acid.

POTASH signifies the substance known in chemistry as potassium oxide, which is the valuable fertilizing ingredient of “potashes,” and in “potash salts.” It is the most costly in the form of sulphate, and less so in the shape of muriate or chloride.

SEPTEMBER
1881



HAS
30 DAYS.

MOON'S PHASES.

	BOSTON.	NEW YORK.	WASH'TON.
N. M.	1 9 18 M.	9 6 M.	8 54 M.
F. Q.	7 11 55 A.	11 43 A.	11 31 A.
F. M.	15 3 17 M.	3 5 M.	2 53 M.
L. Q.	23 7 10 M.	6 58 M.	6 46 M.
	30 5 4 A.	4 52 A.	4 40 A.

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Dela., Virginia and N. Carolina.

D. M.	D. W.	
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Historical Events.

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
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			H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	Th	1st. Gen. Lopez garr., '51	5 25	6 33	10 48	5 27	6 31	10 53
2	Fr	♀ ris., Bost., 2 h. 8 m. M.	5 26	6 31	11 49	5 28	6 30	11 54
3	Sa	♂ ♀. Tr. with England, 1783	5 27	6 30	morn	5 29	6 28	morn
4	S	Gen. Morgan killed, 1864	5 29	6 28	0 59	5 30	6 26	1 4
5	M	♂ rises, Boston, 10 h. 46 m. A.	5 30	6 26	2 14	5 31	6 25	2 18
6	Tu	♂ ♂. ☾ in perigee. [1532	5 31	6 24	3 31	5 32	6 23	3 33
7	W	7th. Queen Elizabeth b.,	5 32	6 23	4 48	5 33	6 22	4 49
8	Th	Battle of Eutaw Springs,	5 33	6 21	rises	5 34	6 20	rises
9	Fr	Geneva Award paid, '73 [1781	5 34	6 19	6 47	5 35	6 18	6 49
10	Sa	♂ rises, Boston, 9 h. 5 m. A.	5 35	6 18	7 21	5 36	6 16	7 24
11	S	♂ ♀. Hudson R. disc'd, 1609	5 36	6 16	7 57	5 37	6 15	8 1
12	M	♂ ♀. Battle of Chapultepec,	5 37	6 14	8 37	5 38	6 13	8 42
13	Tu	♂ ♀. ♀ in ☾. [1847	5 38	6 12	9 21	5 39	6 12	9 26
14	W	♂ stat. Aaron Burr died, 1801	5 39	6 11	10 11	5 40	6 10	10 16
15	Th	15th. ♂ ♂.	5 40	6 9	11 5	5 41	6 8	11 10
16	Fr	Siege of Pueblo, 1847	5 41	6 7	morn	5 42	6 7	morn
17	Sa	♂ rises, Boston, 8 h. 3 m. A.	5 42	6 5	0 1	5 43	6 5	0 6
18	S	☾ in apogee.	5 43	6 3	0 59	5 44	6 3	1 3
19	M	♂ in ☾. Magellan sailed, 1519	5 44	6 2	1 58	5 45	6 1	2 1
20	Tu	♂ ♀. B. of Chicamauga, '63	5 46	6 0	2 57	5 46	6 0	2 59
21	W	☐ ♂. ♂ ♂. St. Matthew.	5 47	5 58	3 57	5 47	5 58	3 58
22	Th	☉ enters ♌. Autumn begins.	5 48	5 56	4 58	5 48	5 56	4 58
23	Fr	23d. ♂ rises, Boston, 4 h.	5 49	5 55	sets	5 49	5 55	sets
24	Sa	♂ ♀. [32 m. M.	5 50	5 53	6 6	5 50	5 53	6 8
25	S	♂ ♀ Reg. Montreal taken, 1775	5 51	5 51	6 38	5 51	5 51	6 41
26	M	♂ in ☾. Battle of Mesilla, 1861	5 52	5 49	7 14	5 52	5 50	7 18
27	Tu	Steamer Arctic lost, 1854	5 53	5 48	7 56	5 53	5 48	8 1
28	W	♂ rises, Boston, 7 h. 27 m. A.	5 54	5 46	8 46	5 54	5 46	8 51
29	Th	♂ in aphelion.	5 55	5 44	9 43	5 55	5 45	9 48
30	Fr	30th. Virginus capt'd, 73	5 56	5 43	10 48	5 56	5 43	10 53

BALDWINVILLE, N. Y., September 29, 1880.

ARTHUR S. CORE, Agt., New York.—Dear Sir: The Universal Ammoniated Dissolved Bone bought of you has given good satisfaction where sold.

Respectfully yours,

J. W. DOW.

GREECE, N. Y., September 28, 1880.

MESSRS. RAFFERTY & WILLIAMS.—Gents: I have never used any Phosphate before last Fall; am much pleased with the appearance of the wheat where I have used your "Universal." Respectfully yours,

JOHN LARKIN.

TESTIMONIALS.

PAVILION CENTRE, Genesee Co., N. Y., July 15, 1880.

ARTHUR S. CORE, Esq.

Dear Sir :—As the season advances we are more able to judge of the effects of Phosphate we ordered from you last spring, and make some estimate of the fall trade. I am pleased to state that the car-load used here and distributed among a number of farmers has given complete satisfaction in every case. All who used this spring will use this fall, a rather remarkable experience with a new brand of Fertilizers. In my own case I used two tons on barley and corn; the effect has been so far more than I anticipated, and I shall later on be able to show you a statement of results very pleasing to my pocket-book. * * * *

Yours truly,

W. L. & E. S. BRADLEY.

PAVILION, Genesee Co., N. Y., Oct. 18, 1880.

ARTHUR S. CORE, Esq.,

Foot 44th Street, East River, New York.

Dear Sir :—I purchased two tons of Rafferty & Williams' Phosphates of you last spring, using 3300 pounds on barley, and the balance on corn. I cut samples, side by side, on the poorest part of the barley-field of nine feet square from strips—1st, with Universal; 2d, no Phosphate; 3d, Americus. The yield on this poor knoll, as nearly as I could figure by the samples which were taken as fairly as I could locate them, was—Universal, 250 pounds used per acre, 25 bushels per acre; no Phosphate, 5 bushels per acre; Americus, 250 pounds used per acre, 23 bushels of barley per acre. Amounts of fertilizer used was gauge of Buckeye Drill. I applied Americus in the hill to part of my corn crop, using 250 pounds per acre nearly, and tested by taking twenty-five consecutive hills in adjoining rows, in equally good soil; ground low, but dry; alluvial soil; on lower flats of Oatka Creek; two crops of corn and one of beans taken off previously, since broken from old pasture. Actual weight increased by Phosphate, $29\frac{1}{2}$ bushels of 70 pounds each per acre. I have used 5250 pounds on wheat this fall.

Yours, etc.,

W. L. BRADLEY.

OCTOBER
1881



HAS
31 DAYS.

MOON'S PHASES.

	BOSTON.			NEW YORK.			WASH'TON.		
	D. H. M.			H. M.			H. M.		
F. M.	7	9	15 M.	9	3	M.	8	51	M.
L. Q.	14	9	42 A.	9	30	A.	9	18	A.
N. M.	22	9	47 A.	9	35	A.	9	23	A.
F. Q.	29	12	3 M.	11	51	A.	11	39	A.

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Dela., Virginia and N. Carolina.

D. M.	D. W.	Historical Events.
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Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
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			H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	Sa	Fulton's first steamboat trip, '07	5 58	5 41	11 59	5 57	5 41	morn
2	S	♀ rises, Boston, 3 h. 9 m. M.	5 59	5 39	morn	5 58	5 40	0 3
3	M	Chief Blackhawk died, 1838	6 0	5 37	1 12	5 59	5 38	1 15
4	Tu	☾ in perigee. Pr. Hayes b. '22	6 1	5 36	2 26	6 0	5 37	2 28
5	W	Battle of the Thames, 1813	6 2	5 34	3 40	6 1	5 35	3 41
6	Th	Alexander Murray died, 1821	6 3	5 32	4 55	6 2	5 33	4 54
7	Fr	☺ 7th. ♂ ris., Bost., 9:45 A.	6 4	5 31	rises	6 3	5 32	rises
8	Sa	☾ 8th. ☾. Fourier died, '37	6 5	5 29	5 51	6 4	5 30	5 54
9	S	♂ ♀. Chicago Fire, 1871	6 7	5 27	6 30	6 5	5 28	6 34
10	M	♂ ♀. ☾ ♀.	6 8	5 25	7 14	6 6	5 27	7 19
11	Tu	Bahamas discovered, 1492	6 9	5 24	8 3	6 7	5 25	8 8
12	W	R. Stephenson died, 1859	6 10	5 22	8 55	6 8	5 24	9 0
13	Th	♂ ♀. Burgoyne surr., 1777	6 11	5 21	9 51	6 9	5 22	9 56
14	Fr	☾ 14th. ♀ ris., Bost., 6:48 A.	6 13	5 19	10 49	6 11	5 21	10 53
15	Sa	☾ gr. elong. E. 25°.	6 14	5 17	11 48	6 12	5 19	11 51
16	S	☾ in apogee. Noah Webster	6 15	5 16	morn	6 13	5 18	morn
17	M	♀ in perihelion. [b., 1758	6 16	5 14	0 47	6 14	5 16	0 49
18	Tu	St. Luke, Evang.	6 17	5 13	1 46	6 15	5 15	1 47
19	W	♂ ♀. ☾ gr. hel. lat. S.	6 18	5 11	2 46	6 16	5 13	2 47
20	Th	♂ ♀. Battle of Navarino, '27	6 19	5 10	3 47	6 17	5 12	3 46
21	Fr	♂ rises, Boston, 5 h. 45 m. A.	6 21	5 8	4 50	6 18	5 10	4 48
22	Sa	☾ 22d. Dr. Payson d., 1827	6 22	5 7	5 53	6 19	5 9	5 50
23	S	☾ Irish Rebellion, 1641	6 23	5 5	sets	6 20	5 8	sets
24	M	♂ ♀. Daniel Webster d., 1852	6 24	5 4	5 54	6 22	5 6	5 59
25	Tu	Philadelphia settled, 1682	6 25	5 2	6 42	6 23	5 5	6 47
26	W	♂ rises, Boston, 2 h. 32 m. M.	6 26	5 1	7 38	6 24	5 3	7 43
27	Th	♀ stat. Metz surrenders, 1870	6 28	5 0	8 42	6 25	5 2	8 47
28	Fr	Wm. M. Tweed arrested, 1871	6 29	4 58	9 50	6 26	5 1	9 54
29	Sa	☾ 29th.	6 20	4 57	11 1	6 27	5 0	11 4
30	S	♂ rises, B., 5 h. 20 m. A.	6 32	4 55	morn	6 29	4 58	morn
31	M	☾ in perigee.	6 33	4 54	0 14	6 30	4 57	0 16

BETHANY, GENESEE Co., N. Y., October 18, 1880.

ARTHUR S. CORE, Esq.,

Foot 44th Street, East River, N. Y.

Sir:—I used your Americus Phosphate on oats last Spring and left strips on each side of lot without application. The phosphate portion was ripe and drawn in before the other was fit to cut, and the yield was at least double; never received so much benefit from phosphate before.

Yours truly,

GEORGE DAUCHY.

THOMPSONVILLE, Conn., Dec. 8, 1880.

MESSRS. RAFFERTY & WILLIAMS. ©

Gentlemen :—After ten years of experience selling Fertilizers (I have sold over 1000 tons the past year), I can honestly say I never sold a Phosphate that gave as *universal* satisfaction as your Americus.

Yours respectfully, H. K. BRAINARD.

HARTFORD, Conn., Nov. 29, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Yours of the 27th to hand and noted. Your Americus Ammoniated Bone Superphosphate, sold by me the past season, has given my trade the best satisfaction of any Phosphate I have ever handled. There may be others just as good, but I have not found them.

Respectfully, F. ELLSWORTH.

BROCKPORT, Monroe Co., N. Y., Nov. 1, 1880.

A. S. CORE, Esq.

Dear Sir :—You wished me to give you the results of the “chemicals” I used last spring on my beans. I drilled in about 150 pounds to the acre of your Dissolved Animal Bones and Potash, as follows : Four parts bone and one part potash. It is impossible for me to give any exact or satisfactory results, as I have not threshed the beans ; but from appearances, I should say the crop was increased from one-third to one-half. This has been the poorest bean season we have had in this section for years ; but where I “fertilized,” I estimate my crop at twenty bushels per acre. I am so well satisfied with the results this year that I shall follow the same formula another season, if I have occasion to raise any beans.

Yours respectfully, F. F. CAPEN.

EAST BERNE, N. Y., Sept. 28, 1880.

MESSRS. RAFFERTY & WILLIAMS, New York.

Gentlemen :—I have used your Americus Superphosphate, bought of your agent here, for three or four years past, and am satisfied that I have been well paid in so doing. Last year I used it on my buckwheat by the side of a piece very heavily manured. Had a very heavy growth of straw, and where the Phosphate was used it was full as good every way as where the manure was used. This year I used the Phosphate by rolling the buckwheat in it, sowing one strip of land in the centre of the lot without any. The difference, both in growth of straw and filling, has been greater than I thought it possible there could be. I also used it on my corn, leaving three rows in the centre without any. On each side there has been a good, large growth of stalks and lots of pumpkins ; while the three rows have been far behind, and no pumpkins. I would say to all farmers who have not used Phosphate, by all means purchase some, give it a fair trial, and you will find yourselves *well paid* for your expense and trouble.

Yours truly,

LEWIS QUAY.

NOVEMBER,
1881



HAS
30 DAYS.

MOON'S PHASES.

	BOSTON.	NEW YORK.	WASH'TON.
	D. H. M.	H. M.	H. M.
F. M.	5 9 19 A.	9 7 A.	8 55 A.
L. Q.	13 6 17 A.	6 5 A.	5 53 A.
N. M.	21 11 37 M.	11 25 M.	11 13 M.
F. Q.	28 7 17 M.	7 5 M.	6 53 M.

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Del., Virginia and N. Carolina.

D. M.	D. W.	Historical Events.
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1	Tu	8 h. ☉. All Saints Day.
2	W	☿ rises, Boston, 4 h. 20 m. M.
3	Th	Wm. C. Bryant born, 1794
4	Fr	Guadaloupe discovered, 1493
5	Sa	☾ 5th. ☿ ☿ ☿.
6	S	☿ ☿ ☿. Gen. Hardee d.,
7	M	8 ☿ ☿. ☿ ☿ ☿ inf. [1873
8	Tu	☿ in ☿. ☿ gr. hel. lat. N.
9	W	♂ rises, Boston, 8 h. 11 m. A.
10	Th	☿ ☿ ☿. Stanley f. Livingstone,
11	Fr	Martin Luther b., 1483 [1874
12	Sa	☿ in perihelion.
13	S	☾ 13th. 8 ☿ ☿. ☿ in apogee
14	M	☿ ☿ ☿ sets, Boston, 6:44 M.
15	Tu	Explosion at Scranton, 1877
16	W	☿ ☿ ☿. John Brown's Raid,
17	Th	☿ stationary. ♂ stat. [1859
18	Fr	☿ sets, Boston, 5 h. 16 m. M.
19	Sa	☿ ☿ ☿. Tweed found guilty, '73
20	S	☿ ☿ ☿. B. of Belle Isle, 1759
21	M	☾ 21st. F. Niagara bomb'd,
22	Tu	☿ gr. hel. lat. N. [1812
23	W	☿ rises, Boston, 0 h. 47 m. M.
24	Th	☿ gr. elong. W. 20°.
25	Fr	☿ in perigee. New Yorkevac'd,
26	Sa	Cowper born, 1731. [1783
27	S	First Sunday in Advent.
28	M	☾ 28th. ☿ sets, Bost. 5:15 M.
29	Tu	☾ Savannah taken, 1778
30	W	St. Andrew.

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
6 34	4 52	1 26	6 31	4 56	1 27
6 35	4 52	2 38	6 32	4 55	2 38
6 36	4 50	3 49	6 33	4 54	3 48
6 38	4 49	4 59	6 35	4 52	4 56
6 39	4 48	6 9	6 36	4 51	6 5
6 40	4 47	rises	6 37	4 50	rises
6 42	4 46	5 51	6 38	4 49	5 56
6 43	4 45	6 43	6 39	4 48	6 48
6 44	4 44	7 39	6 41	4 47	7 44
6 45	4 42	8 38	6 42	4 46	8 42
6 47	4 41	9 38	6 43	4 45	9 42
6 48	4 40	10 37	6 44	4 44	10 40
6 49	4 40	11 35	6 45	4 43	11 37
6 51	4 39	morn	6 46	4 43	morn
6 52	4 38	0 33	6 48	4 42	0 34
6 53	4 37	1 33	6 49	4 41	1 33
6 54	4 36	2 34	6 50	4 40	2 33
6 55	4 35	3 37	6 51	4 40	3 35
6 57	4 35	4 41	6 53	4 39	4 38
6 58	4 34	5 48	6 54	4 38	5 44
6 59	4 33	*sets	6 55	4 38	sets
7 0	4 33	5 28	6 56	4 37	5 33
7 2	4 32	6 32	6 57	4 37	6 37
7 3	4 32	7 40	6 58	4 36	7 44
7 4	4 31	8 52	6 59	4 36	8 55
7 5	4 31	10 5	7 0	4 35	10 7
7 6	4 30	11 17	7 1	4 35	11 18
7 7	4 30	morn	7 2	4 35	morn
7 8	4 29	0 27	7 3	4 34	0 27
7 9	4 29	1 37	7 4	4 34	1 36

PAVILION CENTRE, N. Y., November 18, 1880.

ARTHUR S. CORE, Esq., Foot 44th Street, East River, N. Y.

Sir:—I used a ton of Rafferty and Williams' Phosphates on oats last Spring, 1500 lbs. Americus, 500 lbs. Universal. I had a splendid crop; it was the third crop of oats on not the best of soil. In my judgment the Phosphate added twenty-five bushels per acre to my crop. I have used it wholly on my wheat this Fall. Saw no difference in results as to kinds of their Phosphates. It beats them all.

Yours etc.,

A. HIGGINS.

AUBURN, Dec. 6, 1880.

ARTHUR F. CORE, Esq.

Dear Sir :—Your favor of Nov. 26 I received in due time. In reply, would say : The goods I purchased of you in the fall of 1879 were used on wheat. The result was very satisfactory. Testing them with several other different brands of goods we were satisfied yours were A No. 1. The goods we used in spring of 1880 were on barley, oats, and corn, and were in good mechanical condition and uniform in quality, and we were well pleased with results.

I have had the goods analyzed that I received from you this fall. I enclose a copy of the analysis, which is fully up to your guarantee. Wishing you continued success,

I am, yours truly, H. H. TREAT.

COPY OF ANALYSIS.

No. 11. Americus Dissolved Animal Bone contains equivalent to

Water @ 100° C.....	9.72%		
Nitrogen.....	2.49%	equivalent to Ammonia.....	3.03%
Sol. Phos. Acid.....	6.89%	do. Bone Phos.....	15.04%
Reverted Phos. Acid.....	7.39%	do. do.	16.14%
Insoluble " ".....	0.78%		1.70%
Potash.....	0.21%		

New York, Nov. 10, 1880.

(Signed,)

W. M. HABIRSHAW, F. C. G.

Or showing by actual analysis,

While guarantee was,

Ammonia.....	3.03%	Ammonia.....	2½ to 3½%
Available Phosphoric Acid.....	14.28%	Available Phosphoric Acid.....	12 to 15%

BARTLETT, N. Y., Dec. 6, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Dear Sirs :—Having used your Phosphate this year I am fully satisfied with it. Used it on corn at the rate of 300 lbs. to the acre, also used barnyard and hog manure. The yield from Phosphate exceeded that from barnyard manure, and but little short of that from hog manure. My corn planted on barnyard and hog manure was injured by cut worms, but not where I used Phosphate.

Yours, L. B. GOODSSELL.

GUILDERLAND, Albany Co., N. Y., Nov. 10, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gentlemen :—I have used your Americus Superphosphate ; it gave me entire satisfaction on rye.

Yours truly,

JACOB RYELYEA.

KNOX, Albany Co., Oct. 1, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gentlemen :—I have used your Fertilizer for the past two years on corn and buckwheat ; it gave good satisfaction.

Yours respectfully,

ADAM REAMER.

DECEMBER,
1881



HAS
31 DAYS.

MOON'S PHASES.

	BOSTON.			NEW YORK.			WASH'TON.		
	D.	H.	M.	H.	M.		H.	M.	
F. M.	5	0	30 A.	0	18 A.		0	6 A.	
L. Q.	13	3	21 A.	3	9 A.		2	57 A.	
N. M.	21	0	23 M.	0	11 M.		11	59 A.	
F. Q.	27	3	58 A.	3	46 A.		3	34 A.	

LATITUDE

Of Boston; New England States, State of N. York, Lower Michigan, Northern Illinois, Wisconsin and Iowa.

LATITUDE

Of N. York City; Philadelphia, State of N. Jersey, Conn., Penn., Maryland, Dela., Virginia and N. Carolina.

D.	D.	<i>Historical Events.</i>	
M.	W.		

Sun rises	Sun sets	Moon sets	Sun rises	Sun sets	Moon sets
-----------	----------	-----------	-----------	----------	-----------

1	Th	♀ rises, Boston, 5h. 33m. M.
2	Fr	♂ ♄. John Brown hung, 1859
3	Sa	♂ ♄. Ill. adm'd, '18
4	S	♂ ♀. Harrison nom'ted, '39
5	M	♂ ♄. ♂ rises, Bost. 6. 14 A.
6	Tu	♂ ♄. Chase, Chief Justice, '64
7	W	♂ ♄. Colfax elected Speaker
8	Th	♂ ♄ ♄! Scorpii. [1864
9	Fr	John Milton born, 1608
10	Sa	♂ ♄. ♀ ♄ ♄! Scorpii.
11	S	♂ in apogee.
12	M	♄ sets, Boston, 4 h. 37 m. M.
13	Tu	♂ ♄. 13th. ♂ ♄.
14	W	Geo. Wash. died, 1799
15	Th	Convention at Geneva, 1871
16	Fr	♂ in ♄. Bost. Tea Party, 1773
17	Sa	Great Fire in New York 1835
18	S	♄ sets, Boston, 3 h. 11 m. M.
19	M	♂ ♄. Fort Niagara taken, '13
20	Tu	♂ ♄. S. Carolina sec'd 1860
21	W	♂ ♄. 21st. Winter begins
22	Th	♂ ♄. Puritans landed, 1620
23	Fr	♂ stationary. ♄ in perigee.
24	Sa	♂ rises, Boston, 10 h. 44 m. A.
25	S	Christmas Day.
26	M	♂ in aphel
27	Tu	♂ ♄. 27th. 8 ♂ ♄.
28	W	Iowa admitted, 1846
29	Th	♂ ♄. Ashtabula R. R. dis. '76
30	Fr	♂ ♄. ♂ ♄.
31	Sa	♄ sets, Boston, 3 h. 2 m. M.

H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
7 10	4 28	2 47	7 5	4 34	2 45
7 11	4 28	3 56	7 6	4 33	3 53
7 12	4 28	5 3	7 7	4 33	4 59
7 13	4 28	6 7	7 8	4 33	6 2
7 14	4 28	rises	7 9	4 33	rises
7 15	4 28	5 27	7 10	4 33	5 32
7 16	4 28	6 25	7 11	4 33	6 30
7 17	4 28	7 24	7 12	4 33	7 28
7 18	4 28	8 24	7 13	4 33	8 27
7 19	4 28	9 23	7 14	4 33	9 25
7 20	4 28	10 21	7 15	4 33	10 22
7 21	4 28	11 20	7 16	4 33	11 20
7 21	4 28	morn	7 16	4 34	morn
7 22	4 29	0 19	7 17	4 34	0 18
7 23	4 29	1 20	7 18	4 34	1 18
7 23	4 29	2 23	7 18	4 34	2 20
7 24	4 29	3 28	7 19	4 35	3 24
7 25	4 30	4 34	7 20	4 35	4 30
7 26	4 30	5 39	7 20	4 36	5 34
7 26	4 31	6 42	7 21	4 36	6 37
7 26	4 31	sets	7 21	4 37	sets
7 27	4 32	6 34	7 22	4 37	6 38
7 27	4 32	7 49	7 22	4 38	7 52
7 28	4 33	9 4	7 22	4 38	9 6
7 28	4 34	10 17	7 23	4 39	10 18
7 29	4 34	11 28	7 23	4 40	11 27
7 29	4 35	morn	7 23	4 40	morn
7 29	4 36	0 38	7 24	4 41	0 36
7 29	4 36	1 47	7 24	4 42	1 44
7 30	4 37	2 54	7 24	4 42	2 50
7 30	4 38	3 58	7 24	4 43	3 53

BARTLETT, N. Y., Dec. 6, 1880.

MESSRS. RAFFERTY & WILLIAMS. — *Dear Sirs:* I have used your Superphosphates on wheat and potatoes; am satisfied with the good results, and believe them all that is claimed for them. Yours resp., MARK CHENEY.

SIMSBURY, CONN., Nov. 3, 1880.

MESSRS. RAFFERTY & WILLIAMS. — *Gentlemen:* I have used your Americus Superphosphate and pronounce it as good a Fertilizer for tobacco and corn as I have ever used. Respectfully yours, JAS. H. WHETTON.

BALTIMORE, Md., Nov. 5, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gentlemen :—We feel it our duty to write to you in regard to the views of ourselves and neighbors in general toward your Americus Land Fertilizers. We have been engaged in the sale of different kinds of guanos, bone and phosphate, for some years, and have had a very good chance to ascertain a reliable and good fertilizer.

Your brands certainly stand good, and with a great many farmers, their favorite. Wherever we have sold your fertilizers we have heard that they give perfect satisfaction; and we are satisfied, if our farmers will use Americus Superphosphate they will get their own with usury.

Yours truly, L. KELLUM & CO.

HOOD'S MILLS, Md., Nov. 30, 1880.

S. R. DUVAL, Esq.

Sir :—I used the "Americus Dissolved," on wheat, in 1879, and the result was very satisfactory.

Sowed my present crop with the same, and my wheat looks as well as wheat sowed earlier on some celebrated preparations.

Used a ton of Americus Phosphate in the spring on corn and potatoes, with fine results. The potatoes were the finest in quality and yield I ever raised. I believe Rafferty & Williams' preparations suit our soil very well.

Yours respectfully, W. B. WILLIS.

WOODBINE, Md., Dec. 4, 1880.

S. R. DUVAL.

Dear Sir :—I used Messrs. Rafferty & Williams' Bone Flour and Universal Fertilizer on my corn this season, with good results. Would recommend them to all farmers.

Respectfully, ROBT. MERCER.

HOOD'S MILLS, Md., Dec. 4, 1880.

S. R. DUVAL.

Dear Sir :—I used Messrs. Rafferty & Williams' Americus Dissolved Animal Bone and Bone Flour on my wheat, in the fall of 1879; it acted very well for me. Would cheerfully recommend it as being as good, if not better, than any other fertilizer in use. Wishing you success in the future, I remain,

Respectfully, THOMAS JONES.

COOKSVILLE, Md., Dec. 4, 1880.

MR. S. R. DUVAL.

Dear Sir :—I used Messrs. Rafferty & Williams' Universal Fertilizer on my corn this season. It was instrumental in producing me an excellent crop. I will cheerfully recommend it to any one who is desirous of raising a good crop.

Yours, very truly, HENRY C. CAINES.

GLENWOOD, Howard Co., Md., Dec. 4, 1880.

MR. S. R. DUVALL.

Dear Sir:—I concluded to try some of your Universal Fertilizer on my corn the past season, and am pleased with the very fine results. I would recommend it to farmers who have poor land and wish to get it in good condition.

Respectfully, JAS. O. ETCHISON.

SYKESVILLE, Md., Dec. 9, 1880.

MR. S. R. DUVALL.

Dear Sir:—I used the Universal Fertilizer, manufactured by Rafferty & Williams, of New York, on my corn, and consider it a first-class article for spring crops. I also used it on my potatoes with fine results. Very respectfully,

JOHN G. PEARCE, Meadow View.

ELDERSBURG, Md., Dec. 9, 1880.

MR. S. R. DUVALL.

Dear Sir:—The Universal Fertilizer manufactured by Rafferty & Williams, of New York, which I purchased of you last spring, I consider one of the best fertilizers manufactured for corn. It stands the drought and does not parch the corn, and produces large ears and abundant fodder on poor ground. I would recommend it as a spring fertilizer.

Very respectfully, J. H. STEELE.

SYKESVILLE, Md., Dec. 9, 1880.

MR. S. R. DUVALL.

Dear Sir:—I have used the Universal Ammoniated Dissolved Bone last spring on corn, and it has given entire satisfaction, and is much superior to any fertilizer that I have used during the last five years. All fertilizers that I have used during the last five years, has been a disadvantage to me, except the "Universal" purchased of you, and made by Messrs. Rafferty & Williams, of New York, which I think paid me very handsomely. I would recommend it as one of the best commercial fertilizers known.

Very respectfully, J. S. SHIPLEY & BRO.

RHINEBECK, N. Y., Feb. 28, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gents:—Yours in regard to Fertilizers sold last year, came duly to hand. In order to hear from our customers, we have delayed answering until now. We sold mostly the "Americus Superphosphate," and it has given good satisfaction—one customer in particular, having given it a trial alongside of other leading brands of phosphate, using the same quantity in rows side by side, claims that he could see a great difference in growth and yield, the result being in favor of the "Americus Superphosphate." Think our trade will increase for the coming season.

Yours, respectfully, HOFFMAN & PITCHER.

DELTA, N. Y., Nov. 29, 1880.

MR. ARTHUR S. CORE.

Dear Sir :— * * * My corn was at least 30 per cent. better where I used your Universal Dissolved Bone. Mr. George W. Bork, of Lee Line, tells me his corn was more than 25 per cent better—say nothing about the stalks, which were largely in excess over that which was not treated with Phosphate. Others of my customers speak in high terms, and are well satisfied that Phosphate pays a good per cent, but have not been particular enough in weights and measures to know just what that per cent is. * * *

Yours,

WALTER J. SMITH.

LEE CENTRE, N. Y., Nov. 8, 1880.

MR. W. J. SMITH, Delta, N. Y.

Dear Sir :—Yours of 3d inst. at hand, and in reply to your inquiry as regards the result of my experience with Phosphate would say, I gave it a pretty close testing. I put it side by side with hen manure and ashes, and ashes alone, and in this case the Phosphate produced the largest stalks and best corn. With sweet corn, side by side with the best hog manure, we could not see the difference. In taking all things into consideration, I think it is the best Fertilizer that I have seen.

Yours respectfully,

C. H. THEOBALD.

POTSDAM, St. Lawrence Co., N. Y., Nov. 16, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gentlemen :—Yours received. * * * I can only say now what my customers have said to me, that the Rafferty & Williams Fertilizer is the best they ever bought of me. In Modine I sold three or four tons ; some around Chase's Mills. I was informed that they were so well pleased with it that they are getting up a club to take a car-load, and wished me to get it for them in time to haul it from here in sleighing. One of the parties was here, and said when they were ready for it would come and arrange for it. * * *

Yours,

H. K. BALDWIN.

KNOWERSVILLE, Dec. 7, 1880.

MESSRS. RAFFERTY & WILLIAMS, N. Y. City.

After a careful trial and test of the different Phosphates it gives me pleasure to recommend your "Americus Superphosphate" as comparing favorably with anything I have used.

WM. D. STRIDELL.

BARTLETT, N. Y., Dec. 6, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Sirs :—I used your Universal Dissolved Bone on corn, also used barn manure, hog manure, and hen manure, and with the Dissolved Bone I had the best corn ; also used it on potatoes with very satisfactory results.

Respectfully yours,

R. H. WILLIAMS.

GREECE, N. Y., Sept. 28, 1880.

MR. ARTHUR CORE.

Dear Sir :—Yours of the 15th is at hand. Would say that the "Universal Phosphate" I had of you last year gave excellent satisfaction to my customers. Several state that they were more pleased with it than with some that cost more, and the results just as good, using them side by side on the same pieces and quality of land as experiments.

Yours, etc.,

A. G. CHILDS.

PARMA, N. Y., Sept. 28, 1880.

MESSRS. RAFFERTY & WILLIAMS.

Gents :—I have used your Universal Phosphate for two years on my wheat and barley. It has given entire satisfaction, and is just as good as those that cost more money. I can recommend it to all as being a good Phosphate.

Yours respectfully,

JESSE BROWN.

GATES, N. Y., Nov. 18, 1880.

ARTHUR S. CORE, ESQ.

Dear Sir :—Yours received of the 27th. Concerning the Universal Dissolved Bone which I used in the fall of 1879, it was applied the same as all other brands I used, and was as beneficial as any. I can say it is good, and all right.

Yours truly,

R. L. FIELD.

SOUTH BARRE, N. Y., Sept. 29, 1880.

A. S. CORE.

Dear Sir :—Yours of recent date received. In reply will say, the Universal Phosphate received and sowed on wheat in the fall of 1879 on fallow ground was quite satisfactory, the yield being twenty-seven bushels per acre.

Yours truly,

M. B. DELANO.

BERNEVILLE, Albany Co., N. Y., Sept. 25, 1880.

MESSRS. RAFFERTY & WILLIAMS, New York.

Gentlemen :—I bought of your agent, Isaac H. Reamer, the Americus Superphosphate, and used it on corn. It yielded fifty bushels to the acre. I expect to use it again, as it gave me the best of satisfaction; also my neighbors join me in what I say.

Yours, etc.,

DAVID RHINEHART.

NEW SCOTLAND, N. Y., Nov. 10, 1880.

MESSRS. RAFFERTY & WILLIAMS, New York.

Gentlemen :—I bought of your agent here, Isaac H. Reamer, your Americus Brand of Superphosphate. It has given as good satisfaction as any I ever used; besides it worked very well in the drill, which is a great point among us farmers.

Yours truly,

D. V. S. RANSFORD.

KNOX, Albany Co., N. Y., Dec. 7, 1880.

MESSRS. RAFFERTY & WILLIAMS, N. Y. City.

I bought of your agent, Isaac H. Reamer, the "Americus Brand," and would say that it is the best I have ever used, as I have tried a great many kinds and find it so.

Yours,

JOHN HUNGERFORD.

PITTSFIELD, N. Y., Oct. 3, 1880.

MESSRS. RAFFERTY & WILLIAMS, New York.

Gents :—Yours was received in due time ; have waited to hear from my patrons in different towns. I have used several kinds of Phosphates in the past four years ; this year used both the Americus and Universal Brands ; think I had rather have the Universal than any Phosphate I ever used, considering price and the returns it gave me. Used on corn on what has been called poor land, I am husking about 20 to 100 bushels per acre.

Yours,

B. C. PARKER.

N. B.—Mr. Jas. Ferguson used your "Universal" Dissolved Bone by the side of * * * , and the difference was plain to be seen in favor of the Universal Dissolved Bone.

I have not heard of a dissatisfied person the past season ; instead, they all are well pleased and speak very highly of it.

B. C. P.

EAST NORWICH, L. I., Nov. 29, 1880,

RAFFERTY & WILLIAMS.

Sirs :—My experiments with the "Universal Fertilizer" on corn, gave excellent satisfaction, eared well, and did better than horse manure—side by side. Also, on three-quarters acre rye, used 200 lbs. "Universal Phosphate," and the yield was unexceptionably fine—the straw would average five feet six inches in length.

Yours,

CHARLES W. DOWNING.

EAST NORWICH, L. I., Nov. 29, 1880.

MR. FRANK PHILLIPS.

Dear Sir :—The Universal Ammoniated Dissolved Bone, made by Rafferty & Williams, that you sold me last year, did much better than I expected. Used it on grain, and the yield was fully as good, and I think a little better, than where I used horse manure.

Yours,

ELBERT H. REMSEN.

PLAINFIELD, Conn., Sept. 23, 1880.

RAFFERTY & WILLIAMS.

Gentlemen :—This is to certify that I have sold this year Rafferty & Williams' Superphosphate, and it has done good service—given the best of satisfaction of any Phosphate that I have sold this year. Have sold three kinds besides this. It is the best could find.

Truly yours,

WALDO TILLINGHAST.

Fertilizing Chemicals

For the Manipulation and Manufacture of Chemical Manures

We keep on hand and manufacture to order, in large quantities, the following chemicals :

Dissolved Bone Black,	Available Phosphoric Acid,...	15 to 18 %
Dissolved Raw Bone,	{ Available Phosphoric Acid,...	12 to 15 %
	{ Ammonia,.....	2½ to 3½ %
Dissolved South Carolina Phosphate,	Available Phosphoric Acid,....	12 to 15 %
Ground South Carolina Phosphate,	Bone Phosphate of Lime,....	55 to 65 %
Ground Bone,.....	{ Bone Phosphate of Lime,....	50 to 55 %
	{ Ammonia,.....	3½ to 4½ %
Dried Animal Matter,	Ammonia,.....	10 to 12 %
Dried Blood.....	Ammonia,.....	12 to 15 %
Muriate of Potash,...	Guaranteed.....	80 %
German Kaimit,....	Sulphate of Potash,.....	22 to 25 %
Sulphate of Ammonia,		
Nitrate of Soda.....		
Oil Vitriol,		

SPECIAL FORMULAS MADE TO ORDER.



NORTH GREENBUSH, Rensselaer Co., N. Y., Oct. 1, 1880.

H. D. HULL, Troy, N. Y.

Dear Sir :—Last fall I bought of you some Americus Superphosphate, made by Rafferty & Williams of New York, and used it on a field of rye with the most agreeable results. I could see distinctly where it was sown lighter on some portions of the field than others, and in one portion where none was sown I did not get rye enough to pay for cutting; while, where it was used freely, I had a fine crop entirely satisfactory.

I attribute my whole success in raising the crop last fall to the *Superphosphate* bought of you, and heartily recommend its use to all in need of Fertilizers as the very best I ever used.

Yours respectfully, C. C. PHILLIPS, Ex. Supt. Co. Poor.

EAST BERNE, N. Y., Nov. 10, 1880.

MESSRS. RAFFERTY & WILLIAMS, New York.

Gents :—I used your Americus Brand on corn by the side of manure. The Phosphate beat the manure all to pieces. I will recommend it as the best Phosphate I ever used on corn.

Yours, etc.

ELIAS SCHEMERHORN.

RAFFERTY & WILLIAMS
MAKE THE BEST FERTILIZERS.



**GILES SLOCUM,
SHERWOOD'S**

Cayuga Co., N. Y.